AMSAT News Service Weekly Bulletins
Issue: ANS-323
Date: 2006-11-19
Sources: amsat-ans-2006-ans-323-weekly.txt

AMSAT NEWS SERVICE
ANS-323

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-323.01
AMSAT-NA Signs Agreements to Build Eagle at a UMES Facility

AMSAT News Service Bulletin 323.01
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
BID: $ANS-323.01

AMSAT-NA has accepted an offer to co-locate its Satellite Integration Lab with the Hawk Institute for Space Sciences (HISS), a division of the Maryland Hawk Corporation which is a 501(c)(3) non-profit educational organization affiliated with the University of Maryland Eastern Shore (UMES). HISS is located in Pocomoke, Maryland, on the eastern shore of the Chesapeake Bay. Pocomoke is about a 3-hour drive southeast of the Baltimore-Washington International airport.

AMSAT-NA has been actively searching for a suitable location for the past two years as AMSAT's most recent lab at the municipal airport in Orlando, Florida was condemned due to damage by Hurricane Charley on August 13, 2004. With the unanimous approval of the AMSAT-NA Board of Directors, AMSAT-NA has executed two Memoranda of Understanding, one with the University of Maryland Eastern Shore and the other with Maryland Hawk Corporation, formalizing the relationship. These MOUs give AMSAT-NA essentially no-cost access to the HISS facility in return for sharing its equipment and ideas with HISS.

In addition, the agreement with UMES calls for AMSAT-NA to work collaboratively with UMES to identify opportunities to work together on satellite and related technology projects as well as to work with their students and faculty to enhance hands-on studies and dissertation research. The

possibility also exists for AMSAT-NA scientists and engineers to receive Adjunct status at the UMES.

AMSAT's VP Engineering, Bob McGwier N4HY, commented "I consider these happenings to be a serious beginning of the activities towards a real spacecraft." AMSAT's lead mechanical engineer, Bob Davis KF4KSS, is also an employee of HISS, resulting in AMSAT having a representative on site at all times. Bob Davis was AMSAT's mechanical design expert in the Orlando lab during the AO-40 satellite campaign.

HISS is currently constructing the interior walls for their new 8,000 square foot facility. It is being designed around AMSAT's dual clean room, which was used for AO-40 and is in storage at Florida Space Institute. AMSAT will move the clean room and the parts and equipment currently in storage in the Orlando area to the new lab in the next few months. The facility will also include adequate meeting and office space for visiting AMSAT personnel. The agreement with HISS also provides AMSAT limited access to NASA Wallops Flight Facility with its environmental testing, machine shop, rocket manufacturing and launch facilities.

AMSAT members Bob Davis KF4KSS, Rick Hambly W2GPS, Tom Clark K3IO, Jim Sanford WB4GCS and Bob McGwier N4HY have worked very hard on this project. AMSAT members are encouraged to volunteer to work in the new lab, come by and visit (call first), and donate to the P3E and Eagle satellite funds.

[ANS thanks Rick, W2GPS for the above information]

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SB SAT @ AMSAT $ANS-323.02
24th Space Symposium Proceedings Available in AMSAT Store

AMSAT News Service Bulletin 323.02
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
BID: $ANS-323.02

Bruce, KK5DO, wearing his AMSAT Store Manager hat, says that the 24th AMSAT-NA Space Symposium Proceedings from San Francisco are now available online at the AMSAT Store. You can purchase your copy and with a credit card conveniently online and have it sent to your door.

It is full of interesting topics. In fact, 284 pages and almost two pounds of interesting stuff.

Bruce continues, "Another neat new item is our AMSAT back pack. It is ideal for carrying all your stuff and boasts the AMSAT logo on the front."

Other items for your holiday wish list include wall clocks, desk clocks, shirts, and more. Be sure to bookmark the AMSAT store for that special person in your life so they can find the things you really want that will not break the bank.

Order yours today at the AMSAT Online Store http://www.amsat.org

[ANS thanks Bruce, KK5DO for the above information]

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SB SAT @ AMSAT $ANS-323.03

EaglePedia Upgraded

AMSAT News Service Bulletin 323.03
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
BID: $ANS-323.03

AMSAT-NA's EaglePedia was upgraded this week. Webmistress Emily, N1DID reported, "EaglePedia is back online and most everything is working."

She recommends that EaglePedia users investigate the release notes to the upgraded version on-line at:
http://www.amsat.org/amsat-new/eagle/EaglePedia/index.php/EaglePedia_1.1_release_notes (watch the line wrap)

[ANS thanks Emily, N1DID for the above information]

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SB SAT @ AMSAT $ANS-323.04
SatPC32 Version 12.6 is Released

AMSAT News Service Bulletin 323.04
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
BID: $ANS-323.04

Erich Eichmann DK1TB has donated SatPC32 as a fund-raiser for AMSAT. If you use SatPC32, please support amateur satellite programs by purchasing a SatPC32 registration password.

+ A new control button enables the user to toggle between two timer display modes: A fixed AOS/LOS time of the satellites or, alternatively, a countdown of the remaining hours and minutes until the next AOS or LOS.

+ Show the maximum elevation of the next pass of all selected satellites.

+ Output an acoustic message when a satellite is rising.

+ The sub tone steering functions of the program have been expanded. These functions support now also the Kenwood TS-790A

+ The programs now ignore any characters in brackets after the satellite names in Keplerian element text files. This allows the user's existing Doppler.SQF file to be compatible with the new Keps file format from Celestrak.

The downloadable version is a "trial" version that requires the user to enter their lat/lon every time they start the program. To make the program fully functional, a registration password must be purchased from AMSAT-NA, AMSAT-DL, or AMSAT-UK. Your existing registration password may be used for the new version.

SatPC32 version 12.6 is now available for download from the author's web site: http://www.dk1tb.de/downloadeng.htm

[ANS thanks Wayne, W9AE for the above information]

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SB SAT @ AMSAT $ANS-323.05
Call for AMSAT Journal Articles

AMSAT News Service Bulletin 323.05
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
BID: $ANS-323.05

Ed, WA4SWJ, Editor of The AMSAT Journal says, "It's that time again. If you have any articles for the November/December issue of The AMSAT Journal please let me know by e-mail to my [callsign] at amsat.org."

Ed continues, "I have some content already and to those authors - thank you! I'm always looking for more. Regular contributors - please get going!" Here's your chance to tell your mom you got your name in the paper.

[ANS thanks Ed, WA4SWJ for the above information]

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SB SAT @ AMSAT $ANS-323.06
Cambodian Satellite Opportunity

AMSAT News Service Bulletin 323.06
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
BID: $ANS-323.06

The TAMSAT Group and Siam DX Group will include amateur satellite operations on their 2006 Micro-DXpedition to Cambodia. They plan to use Cambodian callsigns for this event running between November 23 to November 28. Operation is planned to include AO-7, FO-29, SO-50, AO-51, and VO-52 using CW, SSB, and FM. Their planned Satellite Operation Schedule is posted at: http://www.tamsat.org/xu7/sch/

[ANS thanks Tanan, XU7ADN and the TAMSAT group for the above information]

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SB SAT @ AMSAT $ANS-323.07
AMSAT Awards

AMSAT News Service Bulletin 323.07
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
BID: $ANS-323.07

Bruce, KK5DO, wearing his AMSAT Director Contests and Awards hat says, "This week, congratulations go out to all of the following:"

We would like to welcome the following to the satellite community. They have made their first satellite contact and are now members of the AMSAT Satellite Communicators Club:
 Alan Sieg WB5RMG
 Eric Christensen KF4OTN

AMSAT Satellite Communications Achievement Award
 Alan Sieg WB5RMG #440

Eric Christensen KF4OTN #441

South Africa Satellite Communications Achievement Award
Eric Christensen KF4OTN, US100

To see all the awards visit http://www.amsat.org or http://www.amsatnet.com

[ANS thanks Bruce, KK5DO for the above information]

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SB SAT @ AMSAT $ANS-323.08
STSORBIT Plus Author David Ransom SK

AMSAT News Service Bulletin 323.08
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
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Ken Ernandes, N2WWD told AMSAT the sad news of the passing of STSORBIT PLUS author David Ransom on 5 November 2006. While not a ham, Dave was a long-time supporter of AMSAT and a major player in providing Space Shuttle orbital data to the AMSAT and NASA communities. Dave and Ken worked collaboratively to modify STSORBIT PLUS such that it would provide [manual] Doppler tuning information, thus making the software a useful tool for amateur satellite communications.

Amateur Satellite operators around the world will remember Dave for his contributions to AMSAT and will miss him.

[ANS thanks Ken Ernandes, N2WWD for the above information]

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SB SAT @ AMSAT $ANS-323.09
ARISS Status Report for the week of November 13, 2006

AMSAT News Service Bulletin 323.09
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
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1. Belgium Contact Successful
The Flanders Science Festival contact took placed on Friday, November 10. Eleven students, ages 11 - 12, from Henri d'Haese Primary School in Gent-brugge, Belgium spoke with astronaut Michael Lopez-Alegria, KE5GTK, via the telebridge station W5RRR in Houston, Texas. Twenty questions were asked and answered in front of an audience of 25 students and 3 teachers. The audio was webcast and was fed into the Echolink AMSAT server. Three television stations, one radio station and several newspapers covered the Gentbrugge event. It is estimated that approximately 1 million people in Flanders, Belgium and the Netherlands heard the contact.

2. Upcoming School Contacts
An Amateur Radio on the ISS (ARISS) contact has been approved for Landes museum fuer Technik und Arbeit (Mannheim Museum) in Mannheim, Germany. The contact will take place on Monday, November 20 at 14:42 UTC via the tele-bridge station WH6PN in Hawaii. This is a European Space Agency (ESA) Special Event with ESA astronaut Thomas Reiter, DF4TR. The audio will be fed into the EchoLink AMSAT (101 377) and JK1ZRW (277 208) servers and into

the IRLP Discovery Reflector 9010. The audio will also be webcast.

An Amateur Radio on the International Space Station (ARISS) contact has been approved for Centre Hastings Secondary School, a rural school located in Madoc, Ontario, Canada with a student body of approximately 975 students. Centre Hastings, in conjunction with Stirling Senior School, will involve students from several grades by tracking the Space Station, calculating the speed, rate of travel and distance from Earth. They will design and build a space station, write questions to ask the ISS crew, and design and create posters to advertise the event. The school intends to webcast the event on http://www.hpedsb.on.ca. Newspapers and television are expected to cover the contact which is scheduled for Monday, November 20 at 16:35 UTC.

3. ARISS Contact Inspires Students to Earn Licenses
In April 2006, Escola Americana do Rio de Janeiro experienced an Amateur Radio on the International Space Station (ARISS) contact with Marcos Pontes, PY0AEB. As a direct result of that contact, several students became interested in learning more about amateur radio. The Amateur Radio and Space Experiment (AMRASE), (a Brazilian non-governmental organization dedicated to developing technical programs for use in schools) team developed a special workshop for the students which covered radio communications, antenna systems, space communication by satellites and the amateur radio system on the International Space Station. Ten students have studied and are prepared to take their amateur radio license exams.

4. ARISS Presentation at University of California, Fresno
This coming week, American Radio Relay League member Dave Smith, W6TE, will give an Amateur Radio presentation to a college class at California State University, Fresno. His talk will cover CubeSats, Student Space Exploration and Technology Initiative (SSETI), and Amateur Radio on the International Space Station (ARISS) including the satellites SuitSat-1 and SuitSat-2.

5. Students Testing SuitSat-2 Components
At its face to face meeting in San Francisco, the Amateur Radio on the International Space Station (ARISS) team approved a second SuitSat project, an amateur radio system housed in an Orlan suit which has outlived its usefulness for the ISS crew. Much of SuitSat-1's design will be reused in this second project but this time a software designed radio and solar cells will be incorporated into the system. The hardware team has been designing and developing the circuitry for the new satellite. The printed circuit boards were delivered to AMSAT members Bob McGwier, N4HY, and Frank Brickle, AB2KT, who are teaching an elective course on software defined radios at The College of New Jersey (formerly Trenton State College). The students enrolled in the course (approximately half of the senior electrical engineering class) will test the boards.

6. ARISS Teacher Featured on Pride of Britain TV Program
On Tuesday, November 7, the United Kingdom's television station, ITV1, aired the Pride of Britain Awards in which the Teacher of the Year award was given to Head Teacher, Linda Davies. Davies was the teacher who coordinated the first Amateur Radio on the International Space Station (ARISS) contact in Britain for her classes at Wiltshire's Neston Primary School and was commended for her work, which inspired students and promoted science at the school.

7. JSC Training Session Status
A Space Flight Training Division Technical Interchange Meeting (TIM) was held at Johnson Space Center on November 6-10. The ARISS-Russian team from Energia, representatives from the Gagarin Cosmonaut Training Center (GCTC), and ARISS-U.S. members attended. As a result of the meeting, the ARISS U.S. team may be tasked to perform more of the amateur radio training to reduce the amount of time that U.S. crews spend in Russia.

8. ARHOP Meeting Held

On Wednesday, November 1, a meeting was held to discuss the charter for the Amateur Radio Hardware and Operations Panel (ARHOP). The document is being developed by Carlos Fontanot at Johnson Space Center in order to formalize the multi-lateral agreement between all the participating ARISS partners, and to define their roles and responsibilities.

9. Expedition 13 Crew Debrief Held
A crew debriefing session was held on Thursday, November 9 with Jeff Williams, KD5TVQ. Williams provided the team with feedback on the ISS Ham radio equipment and school operations.

10. ARRL Article Covers SuitSat-2
The American Radio Relay League (ARRL) ran an article on a second SuitSat project. See: http://www.arrl.org/news/stories/2006/11/09/101/?nc=1

11. Amateur Radio to be Highlighted on History Channel
In spring 2007, The History Channel plans to run a 13-segment series, "The Secret Life of Machines." One segment will cover Amateur Radio, part of which will focus on ham radio in space. ARISS delegate Rosalie White described the roles of the American Radio Relay League (ARRL), the Radio Amateur Satellite Corporation (AMSAT) and the Amateur Radio on the International Space Station (ARISS) to the History Channel reporter, and provided information on SuitSat-1 and SuitSat-2 and explained how the ARISS team compiles components, and designs, tests and launches its systems. Follow-up material, which covered SuitSat-1 and an ARISS school whose 5th graders built 5 types of crystal radios and compared their qualities, was sent to him.

[ANS thanks Carol, KB3LKI for the above information]

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SB SAT @ AMSAT $ANS-323.10
First Live HDTV Broadcast From Space

AMSAT News Service Bulletin 323.10
>From AMSAT HQ SILVER SPRING, MD.
November 19, 2006
To All RADIO AMATEURS
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The first live HDTV broadcast from space took place last week. It featured Expedition 14 Commander Michael Lopez-Alegria and Flight Engineer Thomas Reiter, serving as camera operator. The broadcast was carried by Discovery HD Theater and NHK and was also shown at Discovery Channel stores. Known as the Space Video Gateway, the system transmits high bandwidth digital television signals to the ground that are not only spectacular, but also valuable to scientists, engineers and managers.

The Expedition 14 crew continues spacewalk preparations. The Nov. 22 spacewalk includes a commercial golf experiment performed by Flight Engineer Mikhail Tyurin. This experiment is dedicated to the 200th anniversary of establishing diplomatic ties between Russia and the United States and to commemorate the golf shot of Alan Shepard Jr. on the moon.

[ANS thanks NASA for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors

to AMSAT Project Funds, will be eligible to receive additional benefits.
Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM